

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Translation

Applicant's or agent's file reference IEC030038PCT		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CN03/01155	International filing date (day/month/year) 31.Dec.2003 (31.12.2003)	Priority date (day/month/year) 31.Dec.2002 (31.12.2002)	
International Patent Classification (IPC) or national classification and IPC A61K31/222,31/194,31/7012,31/7028, A61P25/28			
Applicant Institute of Materia Medica, Chinese Academy of Medical Sciences et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and /or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty ,inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2)with regard to novelty ,inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application.</p>			
Date of submission of the demand 29.APR.2004 (29.04.2004)		Date of completion of this report 02. JUN.2004 (02.06.2004)	
Name and mailing address of the IPEA/CN 6 Xitucheng Rd., Jimen Bridge, Haidian District, 100088 Beijing, China Facsimile No. 86-10-62019451		Authorized officer 4212  Telephone No.86-10-62085087	

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/CN03/01155

I. Basis of the report

1. With regard to the elements of the international application:

☒ the international application as originally filed☐ the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the claims:

Nos _____, as originally file

Nos _____, as amended (together with any statement) under Article 19

Nos _____, filed with the demand

Nos _____, filed with the letter of _____

☐ the drawings:

sheets/fig _____, as originally filed

sheets/fig _____, filed with the demand

sheets/fig _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. with regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☐ The amendments have resulted in the cancellation of:☐ the description, pages _____☐ the claims No. _____☐ the drawings, sheets/fig _____5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/CN03/01155**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement:**

Novelty (N)	Claims 1-11	YES
	Claims	NO
Inventive step (IS)	Claims 1-11	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-11	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The present invention relates to the use of extract from Wangla (*coeloglossum viride* (L) Hartm. Var. *Bracteatum* (Willd.) Richter), succinate derivative esters, and derivatives and pharmaceutical acceptable salts thereof, for the manufacture of a pharmaceutical preparation for the treatment of dementia, particularly for the treatment of Alzheimer' disease and Vascular dementia.

The following documents have been considered for the purpose of this report:

D1= Huang Shengyang et al. Studies on the Chemical Constituents of *Coeloglossum viride* (L.) hartm. Var. *Bracteatum* (willd.) Rchtr. Acta Pharmaceutica Sinica, Mar 2002, Vol. 37, No. 3, pages 199-203.

D2= Huang shengyang et al. Studies on the Chemical Constituents of Tibetan Medicine Wangla(Rhizome of *Coeloglossum viride* Var. *Bracteatum*). China Journal of Chinese Materia Medica, Feb 2002, Vol. 27, No. 2, pages 551-554.

D3= Huang shengyang et al., Two New Isobutyltartrate Monoesters from *Coeloglossum viride* (L) Hartm. Var. *Bracteatum* (Willd.) Richter. Chinese Chemical Letters, Jun 2002, Vol. 13, No. 6, pages 551-554.

D4= Haruhisa Kizu et al., Studies on Nepalese Crude Drugs .XXVI. Chemical Constituents of Panch Aunle, the Roots of *Dactylorhiza hatagirea* D.Don. Chem. Pharm. Bull., Nov 1999, Vol. 47, No. 11, pages 1621

D5= Robert W. Gray et al., Die Konstitution des Loriglossins. Helv. Chem. ACTA., Apr. 1977, Vol. 60, No. 4, pages 1305.

(1) Novelty

D1、D3-D5 discloses several compounds of formula (I) of the present invention. But the activities of the said compounds are not described in the paper. D2 discloses chemical constituents extracted from Tibetan Medicine Wangla(Rhizome of *Coeloglossum viride* Var. *Bracteatum*). However, it doesn't disclose the compounds of the present invention and use thereof.

The subject-matter of claims 1-11 is considered to be novel over the documents cited in the search report, as none of them explicitly discloses the use of succinate derivative esters, derivatives and pharmaceutical acceptable salts thereof, for the manufacture of a pharmaceutical preparation for the treatment of dementia (Art.33(2) PCT).

(2) Inventive step

The present invention relates to the use of succinate derivative esters, derivatives and pharmaceutical acceptable salts thereof, for the manufacture of a pharmaceutical preparation for the treatment of dementia. According to the documents D1-D5, this is not considered to be obvious to a person skilled in the art. Therefore, the subject-matter of claims 1-11 is considered to involve an inventive step(Art.33(3) PCT).

(3) Industrial application

The subject-matter of claims 1-11 appears to be industrially applicable (Art.33(4) PCT).